

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Work Order ID 135391

135391

Page 2

Wednesday, August 12, 2015 4:26:34 PM

Item ID: D2891-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Support 2.25
Start Date: 8/12/15 Start Qty: 15.00 ***15*** Cust Item ID:
Required Date: 8/12/15 Req'd Qty: 15.00 ***15*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							DAS 41 9-89
130		0.01				14			15-8-31
HandFXtube	Memo								
Hand Finishing Crosstubes	Per note 8 on page 1 of dwg D2891, Prep inner concave surface of support and apply 3M Scotch-Weld as per dwg. 24H of cure time.	132391							
140	QC3- Inspect Part Finish	0.00							DAS 38 9-89
140		0.00				(14)			SEP 0 1 2015
QC	Memo								
Quality Control									
170	Identify as per dwg & Stock Location	0.00							DAS 27 9-89
170		0.00				14			SEP 0 1 2015
Packaging	Memo								
Packaging	LOCATION : LG052								

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WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :																							
Misidentified ☐	Past Due ☐																								

Work Order ID 135391***135391***

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Wednesday, August 12, 2015 4:26:34 PM

Item ID: D2891-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Support 2.25

Start Date: 8/12/15

Start Qty: 15.00

15

Cust Item ID:

Required Date: 8/12/15

Req'd Qty: 15.00

15

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.02

Quality Control

MCS SEP 02 2015

20150901

SH

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

Picklist Print

Wednesday, August 12, 2015 4:26:34 PM

Page 1

Work Order ID: 135391

135391

Parent Item: D2891-1

D2891-1

Parent Item Name: Support 2.25

Start Date: 8/12/15

Required Date: 8/12/15

Start Qty: 15.00

Required Qty: 15.00

Comments:

IPP C02.11.26Added P/OKJ

IPP D 08.03.19 Re-format EC verified: DD

IPP Rev:E

11.08.04 as per dwg rev.B DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

DSK076

Manufactured

No

110

Each

8.0000

0.5

7.5

DAS

14

9-89

DSK076

D2891-1 Turning Detail

**

15/08/25

Location

Loc Qty

Loc Code

MAT060

8

133137

3

134408

5

3
2

135482 X 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

DART AEROSPACE LTD		Work Order: 135391
Description: Ø2.250 Support		Part Number: D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.188	0.193		.188	.188	.188	.188	.188
AB	0.240	0.260		.250	.250	.250	.250	.250
AC	0.115	0.150		.123	.123	.123	.123	.123
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.010	0.020		.015	.015	.015	.015	.015
AF	0.240	0.260		.250	.250	.250	.250	.250
AG	0.290	0.310		.300	.300	.300	.300	.300
AH	0.115	0.150		.135	.135	.136	.136	.136
AI	0.454	0.474		.464	.464	.463	.462	.461
AJ	2.779	2.789		2.783	2.783	2.783	2.783	2.783
AK	0.240	0.260		.250	.250	.250	.250	.250
AL	1.002	1.042		1.037	1.037	1.039	1.037	1.040
AM	0.053	0.073		.063	.063	.063	.063	.063
AN	0.257	0.262		.258	.258	.258	.258	.258
AO	1.663	1.683		1.673	1.673	1.673	1.673	1.673
AP	0.053	0.073		.063	.063	.063	.063	.063
AQ	0.022	0.042		.032	.032	.032	.032	.032
AR								
AS								
AT								
Accept/Reject								

Measured by:	DAS 14 9-89	Date:	15/08/24
Audited by:	JK	Date:	15-8-24
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order:	135391
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	16	17	18	19	20
HAAS Section								
AA	0.188	0.193		.188	.188	.188	.189	.189
AB	0.240	0.260		.250	.248	.247	.250	.250
AC	0.115	0.150		.123	.123	.123	.123	.123
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.010	0.020		.015	.015	.015	.015	.015
AF	0.240	0.260		.250	.250	.250	.250	.250
AG	0.290	0.310		.300	.300	.300	.300	.300
AH	0.115	0.150		.136	.136	.136	.136	.136
AI	0.454	0.474		.461	.460	.460	.462	.462
AJ	2.779	2.789		2.783	2.783	2.783	2.783	2.783
AK	0.240	0.260		.250	.250	.250	.250	.250
AL	1.002	1.042		1.036	1.036	1.033	1.035	1.035
AM	0.053	0.073		.063	.063	.063	.063	.063
AN	0.257	0.262		.258	.260	.260	.260	.260
AO	1.663	1.683		1.673	1.672	1.672	1.673	1.673
AP	0.053	0.073		.063	.063	.063	.063	.063
AQ	0.022	0.042		.032	.032	.032	.032	.032
AR								
AS								
AT								
Accept/Reject								

DAS

Measured by:	14	Date:	15/08/25
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9-89

Audited by:	>L	Date:	15-8-25
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Preliminary Approval:		Date:	
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Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order:	135391
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1	

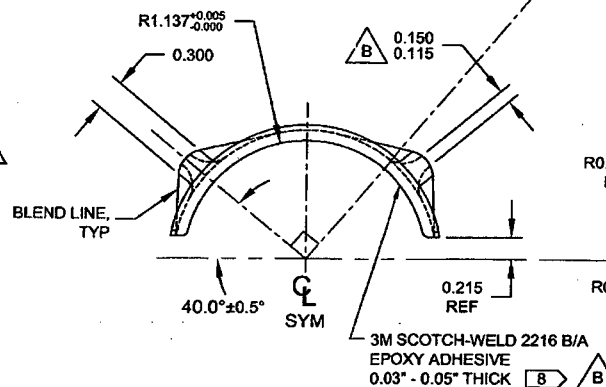
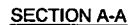
FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1/	2/	3/	4/	5/
HAAS Section								
AA	0.188	0.193		.189	.189	.189	.189	
AB	0.240	0.260		.250	.250	.250	.250	
AC	0.115	0.150		.123	.123	.123	.123	
AD	0.040	0.060		.050	.050	.050	.050	
AE	0.010	0.020		.015	.015	.015	.015	
AF	0.240	0.260		.250	.250	.250	.250	
AG	0.290	0.310		.300	.300	.300	.300	
AH	0.115	0.150		.135	.135	.135	.135	
AI	0.454	0.474		.464	.464	.463	.463	
AJ	2.779	2.789		2.783	2.783	2.783	2.783	
AK	0.240	0.260		.250	.250	.250	.250	
AL	1.002	1.042		1.038	1.037	1.036	1.036	
AM	0.053	0.073		.063	.063	.063	.063	
AN	0.257	0.262		.259	.259	.259	.259	
AO	1.663	1.683		1.679	1.679	1.676	1.676	
AP	0.053	0.073		.063	.063	.063	.063	
AQ	0.022	0.042		.032	.032	.032	.032	
AR								
AS								
AT								
Accept/Reject								

Measured by:	DAS 14 9-89	Date:	15/08/25
Audited by:	31	Date:	15-8-27
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

8) FOR THE ENTIRE INNER CONCAVE SURFACE:
ABRADE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK
(OR EQUIVALENT). APPLY 0.03" TO 0.05" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A
ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.



B	RMV FINISH, ADD 3M Z216, ADD H925 MAT'L OPTION, UPDATE TOLERANCE (ZN D4-1,84-1,86-1)	CP	11.07.15
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>Q</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>Q</i>		
CHECKED	<i>AJS</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D2891	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	Ø2.250 SUPPORT	NTS
DATE	11.07.15	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS LOANED TO YOU FOR YOUR COMPANY'S USE ONLY. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	